3: Mariner F-5 (1806-1810) 1818
OU9 Tonga OU9

alike; the grooved side of the mallet is chiefly used first, and the smooth side afterwards. They generally beat alternately: early in the morning, when the air is calm and still, the beating of gnatoo at all the plantations about has a very pleasing effect; some sounds being near at hand, and others almost lost by the distance, some a little more acute, others more grave, and all with remarkable regularity, produce a musical variety that is very agreeable, and not a little heightened by the singing of the birds, and the cheerful influence of the scene. When one hand is fatigued, the mallet is dexterously transferred to the other, without occasioning the smallest sensible delay. In the course of about half an hour it is brought to a sufficient degree of thinness, being so much spread laterally as to be now nearly square when unfolded; for it must be observed, that they double it several times during the process, by which means it spreads more equally, and is prevented from breaking. The bark thus far prepared is called *fetagi*, and is mostly put aside till they have a sufficient quantity to enable them to go on at a future time with the second part of the operation, which is called *cocanga*, or printing with *coca*. When this is to be done, a number employ themselves in gathering the berries of the *toe*, the pulp

3: Mariner F-5 (1806-1810) 1818
OU9 Tonga OU9

of which serves for paste; but the mucilaginous substance of the *mahoá* root is sometimes substituted for it: at the same time others are busy scraping off the soft bark of the *coca* tree and the *tooi-tooi* tree, either of which when wrung out, without water, yields a reddish brown juice, to be used as a die. The *cobéchi*, or stamp is formed of the dried leaves of the *páoongo* sewed together so as to be of a sufficient size, and afterwards embroidered, according to various devices, with the wiry fibre of the cocoa-nut husk*; they are generally about two feet long, and a foot and a half broad: they are tied on to the convex side of half cylinders of wood, usually about six or eight feet long, to admit two or three similar operations to go on at the same time. The stamp being thus fixed, with the embroidered side uppermost, a piece of the prepared bark† is laid on it, and smeared over with a folded piece of *gnatoo* dipped in one of the reddish brown liquids before mentioned, so that the whole surface of the prepared bark becomes stained, but particularly those parts raised by the design in the stamp: another piece of

* Making these *cobechis* is another employment of the women, and mostly women of rank.

† The edges of the beaten bark, which is generally hard, knotty, and ragged, are cut off straight.

22: West M-3 (1846-1855) 1865 OU9 Tonga OU9

timber is obtained. The *toa*, or iron-wood tree, (*Casuarina equisetifolia*,) is somewhat abundant, but it is not much used by the natives, because of its excessive hardness and heaviness. Clubs and spears were made from it in former times. The large posts required for buildings are obtained from the *koka*, whose timber is very durable in the ground. It likewise affords the best firewood; and a dark liquid which exudes from its trunk, when the bark has been scraped off, is employed in stamping patterns upon the native cloth.

Some of the most stately and magnificent trees are only fit for firewood, and some not even for that. Among these may be reckoned the *ovava*, a species of banyan; the *buko*, (belonging to the natural order of *Bombaceæ*,) and the *gatae*, (*Erythrina corallodendron*.) This latter tree is very commonly planted to distinguish the boundaries of land belonging to different proprietors.

Having considered, so far, the natural productions of the islands, as a whole, we shall now resume our personal narrative, by taking the reader to Vavau, where the first years of our residence were spent.

77: Whitcombe Y-3 (no date) 1930 OU9 Tonga OU9

Fish nets (*finaki*). A fish net is made from the leaves of the coconut palm. The roots are plaited into a round net very much like a lobster net; when ready it is sunk in the sea, weighed down by a stone or some heavy weight. The fish swim into an opening in the net.

USES OF THE COCONUT PALM

The coconut tree is considered by the natives to be the most useful tree in Tonga. It is indispensable in house building, and the number of articles made from its wood and leaves is remarkable. The heart of the tree is used for making walking sticks, the bark for medicine, the roots for a kind of fish net called *finaki*, the leaves for baskets, thatching houses, and making mats and flooring. The uses of the fruit are innumerable.

As a medicine the fruit is given to pregnant women to increase the supply of breast milk. For this the green nuts are used. A newborn child is always given *namoa*, which is made from the roasted flesh of the ripe nut. This roasted flesh is chewed by someone, usually a woman, and when taken from the mouth is rolled in a piece of *fetaaki*, squeezed, and the juice given to the child. This is his only food for four days.

Ripe coconuts are valuable for copra, which is the dried flesh. This is sold to European markets largely, where it is used for soap, candles, oils, and a variety of products. The shells of the coconut are burned and made into charcoal (*malala*) for ironing. Kava cups also are made from the shells.

No native food is considered complete without the presence of coconut in one form or another. Yams, fish, and bananas are usually cooked in the milk extracted from the flesh of the ripe coconut and strained through coconut fiber.

Brooms are made from the ribs of the leaf, and the leaf stem is used for stirring oil, also as weights for tapa which is spread on the ground for printing. The bark (*kaka*), which surrounds the leaves at the body of the palm, is used to make bags for wrapping arrowroot and medicines.

The several varieties of coconut palms have different uses.

VARIETIES OF COCONUT PALMS

KAPA. The nut is gathered when green and husked, the husk put in a native oven and left for two weeks, after which it is taken out and beaten to remove all the dust. The fiber thus obtained is plaited into mats.

ointments prescribed were of an antibacterial nature. Only an antifungal antibiotic would have worked in this case. After treatment with the plant remedy (a concoction of the leaves of *Solanum uporo*, *Evodia hortensis*, and *Capsicum frutescens*), the patient reported that she was able to sleep, no longer kept awake by pain.

Collocott (7) believes that diagnosis proceeds by a series of trials with different medicines. He reports that one cure after another is tried until one is found that works, or until the patient dies. As in Fiji, different practitioners have their own special cures. For each of them the etiology of a disease is unimportant. What matters is knowing if a certain condition is one they can cure (23). Each practitioner is highly specialized and may treat illnesses associated with only one body system. Some practitioners will treat all illnesses but are specialized in that they treat only children or the aged. I did not encounter any practitioner who diagnosed a complaint through communications with the supernatural world. There is one reference in the literature, however, which indicates that there is some belief in the psychological causation of certain diseases. Churchward's dictionary of the Tongan language defines the word *sausau* as a bundle of leaves buried near a tree and believed to cause sickness to anyone taking fruit from the tree. The word *fula* is defined as a swelling caused by breaking a *tapu* (a cultural restriction), especially by eating a chief's leftover food (6).

Few plants are cultivated specifically for their medicinal value, and many useful species are found growing in villages. Most medicinal plants are collected in "the bush" or near the sea. There do not appear to be any special harvesting techniques and the leaves, bark, and roots are taken from any plant of the required species.

Most medicines are prepared in the form of infusions. Generally, a handful of the required plant part is wrapped in a clean white cloth or the stipule of *Cocos nucifera* and squeezed five or six times in a half coconut shell of fresh water. The resulting filtrate is taken usually once daily until the patient responds to treatment. In all cases where stem or root bark is used, the cork

92: Kaeppler E-4 (1964-1967) 1971
OU9 Tonga OU9

169). And, as mentioned above, ragged mats were worn for mourning ceremonies. However, Cook does not list the function of mats as ceremonial gifts, which is understandable because he did not attend complete funeral or wedding ceremonies --the main occasions of ceremonial giving.

Forster's *Catalogue of curiosities* lists eight plaited items, seven of which are called mats and one an apron, and George Forster mentions 'their elegant mats, which for workmanship and variety excelled even those of Taheitee' (1777: I, 439).

Number 53 in the Forster collection is listed as 'a strong matt, with a black pattern' (plate 2*a*). It is made of light-coloured pandanus (127 cm. × 207 cm.) decorated with a diagonal pattern of black pandanus, and appears to be unfinished if spread out. This item may be a *ta'ovala la*. According to Tongan tradition certain *matāpule* (ceremonial attendants), whose function it was to supervise ceremonies such as installations of title holders and funerals of chiefs, wore a waist mat decorated with black pandanus that came to a point in the back. If this mat were folded diagonally and then wrapped, the design would be on the outside, a triangle would hang to the back, and the part that was folded inside need not be decorated. The only other example of a *ta'ovala la* so far located is in the Museum and Art Gallery, Glasgow, and it is plaited so that one side comes to a triangular point and need not be folded.

Item Number 56, listed as a mat 'pierced with holes' (plate 2*b*), is probably one of the items George Forster described in his journal as aprons, 'curiously wrought of mats in resemblance of fretwork' (1777: I, 474). This type of garment is a *kie fau* or *teunga fau* and is made of the inner bark of the hibiscus tree (*fau*) that has been partially rotted in sea water. The texture is fine and delicate, and the manufacture is a difficult enterprise in contrast to the plaiting of sturdy pandanus mats. *Kie fau* were worn as waist mats only by chiefs—*kie fau* indicating chiefly rank, just as wearing the *ta'ovala la* indicated that one was a certain kind of *matāpule*.

There are three different types of *kie fau*. The type represented by the Pitt Rivers example (160 cm. × 86 cm.) is plaited with square holes and has a fringe of tabs sewn on with twisted '*olongā* (*Pipturus argenteus*) fibre. A second type with much more openwork is found in Museum collections in Cambridge, Dublin, Bern, and Newcastle—all of which have Cook collections—but it is not always known that these particular specimens are from Cook's voyages. The third kind of *kie fau* has small plaited tabs that form an upper layer plaited out from a solid bottom layer. This type is in the Cook collections in Vienna and Stockholm, and there is one in Madrid that was collected by the Spaniard Malaspina in Vava'u in 1792. The manufacture of these types of *kie fau* was probably discontinued in the early nineteenth century. Today *fau* fibre is crocheted into openwork patterns for similar, but more easily made, decorative pieces that can be worn by anyone. The openwork technique is still known, but the more easily worked pandanus is used instead of *fau*. The functional replacement of the *kie fau*, i.e., the chief's waist mat, is now a soft, fine pandanus mat decorated with red feathers and imported from Samoa. This suggests that when the Tongan high ranking *kie fau* ceased to be made there was nothing of local manufacture that was of high enough status to replace it, and a foreign product was brought in.

But the most precious of all the plaited items to the Tongans, and to Cook's men as well, were the so-called 'aprons of cocoanut fibre'. Cook described them in his

A. [See End Plate 2, following p. 220--Analyst]